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The University of North Carolina

RECORD

The Graduate Department

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GRADUATE DEPARTMENT.

COMMITTEE.

FRANCIS PRESTON VENABLE, PH.D., D.SC., LL.D., PRESIDENT.
CHARLES ALPHONSO SMITH, PH.D., LL.D., DEAN.
JOSHUA WALKER GORE, C.E.
EBEN ALEXANDER, PH.D., LL.D.
WALTER DALLAM TOY, M.A.

OFFICERS OF INSTRUCTION.

KEMP PLUMMER BATTLE, LL.D., *Alumni Professor of History.*
JOSHUA WALKER GORE, C.E., *Professor of Physics.*
THOMAS HUME, D.D., LL.D., *Professor of English Literature.*
WALTER DALLAM TOY, M.A., *Professor of the Germanic Languages and Literatures.*
EBEN ALEXANDER, PH.D., LL.D., *Professor of the Greek Language and Literature.*
WILLIAM CAIN, C.E., *Professor of Mathematics.*
HENRY HORACE WILLIAMS, A.B., B.D., *Professor of Philosophy.*
HENRY VAN PETERS WILSON, PH.D., *Professor of Zoology.*
COLLIER COBB, A.M., *Professor of Geology and Mineralogy.*
MARCUS CICERO STEPHENS NOBLE, *Professor of Pedagogy.*
CHARLES ALPHONSO SMITH, PH.D., LL.D., *Professor of the English Langnage.*
GEORGE HOWE, PH.D., *Professor of the Latin Language and Literature.*

CHARLES HOLMES HERTY, PH.D., *Smith Professor of General and Agricultural Chemistry.*

CHARLES LEE RAPER, PH D., *Professor of Economics.*

JAMES DOWDEN BRUNER, PH.D., *Professor of the Romance Languages and Literatures.*

ALVIN SAWYER WHEELER, PH.D., *Associate Professor of Organic Chemistry.*

WILLIAM CHAMBERS COKER, PH.D., *Associate Professor of Botany.*

ARCHIBALD HENDERSON, PH D., *Associate Professor of Mathematics.*

THOMAS JAMES WILSON, JR., PH.D., *Associate Professor of Latin.*

JAMES EDWARD LATTA, A.M., *Associate Professor of Physics.*

MARVIN HENDRIX STACY, A.M., *Associate Professor of Civil Engineering.*

JOSEPH GREGOIRE DEROULHAC HAMILTON, PH.D., *Associate Professor of History.*

WILLIAM STANLEY BERNARD, A.M., *Associate Professor of Greek.*

CANDIDATES FOR GRADUATE WORK.

Graduates of the University of North Carolina and of other universities and colleges of good standing are, on application to the President or Dean, ordinarily admitted to advanced courses of instruction, free of charge for tuition. There is, however, a registration fee of ten dollars An applicant for admission, unless a graduate of the University of North Carolina, is required to present his diploma and a certificate of scholarship and character. If in any department the preliminary training of candidates has not been sufficient to qualify them for strictly graduate work, they will be required to take such undergraduate courses as may be prescribed by the head of the department; but these courses will not be counted for hours in work leading to a graduate degree.

Students who are not graduates may, if they prove themselves qualified, take graduate courses; but no graduate degree will be given to a student who does not already hold a Bachelor's degree from some institution of approved standing.

All courses must be approved by the President or Dean.

DEGREES.

The University offers to graduate students advanced work leading to the degrees of Master of Arts (A.M.), Master of Science (S.M.), and Doctor of Philosophy (Ph.D.).

Master of Arts.

Candidates for the degree of Master of Arts may be either resident or non-resident, non-resident courses being given only to graduates of this University. The candidate in residence must complete satisfactorily one year of graduate work consisting of at least fifteen hours a week of recitations or lectures, eight hours of which must be taken from courses in the Graduate Department, the remaining seven from courses in the Graduate Department or from undergraduate courses open only to Juniors and Seniors. The candidate shall select one major subject and two minor subjects. The course as a whole must have unity and must be pursued with definite aim.

A thesis based on the major subject of study and showing capacity for original research, must be submitted on or before May 1 of the given year, and must be filed in typewritten form on or before May 15.

Candidates who have received the Bachelor's degree from the University of North Carolina may be recommended for the Master's degree after at least two years of study as non-resident students, the requirements being in all other respects the same as for resident students; and they must satisfy the Faculty by examinations and theses that they are worthy of recommendation for the degree. The work must be completed within the period of two years for which the registration is granted; otherwise a second registration fee must be paid. The fee for non-resident students is ten dollars.

Master of Science.

The degree of Master of Science is conferred in the Department of Applied Sciences under conditions similar to those stated above for the degree of Master of Arts.

Doctor of Philosophy.

A candidate for the degree of Doctor of Philosophy is required to pursue, in residence at the University, a prescribed course of advanced study and research in one major subject and two allied minor subjects. In general a term of three years is required, but the degree may be secured in two years in the case of exceptional preliminary training in the major subject.

These requirements of residence and study are, however, entirely secondary. The degree is conferred not simply for faithful study in a determinate field of work for a prescribed period, but because of a high attainment in a special branch of learning, which the candidate must have manifested not only in examination, but by a thesis which gives evidence of independent research and contributes to knowledge. The candidate should choose his major subject in a department in which he has already pursued, for a considerable period, a systematic course of study. To receive this degree, a knowledge of French and German will be found indispensable in most instances. The thesis must be accepted before the candidate may be admitted to examination. The examinations are both written and oral. They demand a minute knowledge of a special field of work as well as a general acquaintance with the department of learning in which the candidate offers himself for the degree.

COURSES OF INSTRUCTION.

GREEK.

Professor ALEXANDER.

7. Greek Drama: Euripides, Iphigenia among the Taurians; Sophocles, Oedipus Tyrannus; Aeschylus, Agamemnon; Aristophanes, Clouds; Aristotle, Poetics. *Both terms, three hours.*

8. Prose Composition, advanced course. *Fall term, two hours.*

11. Greek History: the selections from Greek historians in parts I. and II. of Baumeister's *Quellenbuch zur Alten Geschichte*. *Both terms, two hours.*

12. Bucolic Poetry: the Idyls of Theocritus, Bion, and Moschus. *Both terms, two hours.*

LATIN.

Professor HOWE.

9. Roman elegiac poets: a detailed study of the lives of Catullus, Tibullus, Propertius, and Ovid, with rapid reading of selected elegies. *Both terms, two hours.*

11. The study of a particular author or period in Roman literature; practice in rapid reading, with translation of the more difficult passages only. *Both terms, two hours.*

Associate Professor WILSON.

5. Pliny, selected letters; Juvenal, Satires; Martial, selected epigrams; reading with special reference to the private life of the Romans at the close of the first century A.D. *Both terms, two hours.*

12. Lectures on comparative syntax of Greek and Latin; principles illustrated from Homer and Terence. *Both terms, two hours.*

GERMANIC LANGUAGES.

Professor Toy.

4. Middle High German: Paul's *Mittelhochdeutsche Grammatik*; Bachmann's *Mittelhochdeutsches Lesebuch*; translation into New High German. *Both terms, three hours.*

5. Old High German: Braune's *Althochdeutsche Grammatik*; Braune's *Althochdeutsches Lesebuch*. This course alternates with German 4. *Both terms, three hours.*

6. Gothic: Braune's *Gotische Grammatik* and Heyne's *Ulfilas*. This course is intended to lay a foundation for the philological study of the Germanic dialects. The journals at the disposal of students of Germanic philology are mentioned below under the department of *English Language*, p. 10. *Both terms, three hours.*

7. Goethe: Goetz von Berlichingen, Tasso, Dichtung und Wahrheit, Gedichte, Faust. In connection with the interpretation of the texts, the life of Goethe will be studied. Selected chapters of Hermann Grimm's *Vorlesungen*, Scherer's *History of German Literature*, and Francke's *History of German Literature* will be read. *Both terms, three hours.*

FRENCH.

Professor Bruner.

3. The History and Theory of French Tragedy; rapid reading of the tragedies of Corneille, Racine, Voltaire, and Victor Hugo; constant reference, for purposes of comparison, to other tragedies, both ancient and modern; lectures and discussions. *Both terms, three hours.*

4. The History and Theory of French Comedy; rapid reading of the comedies of Moliere, Regnard, Marivaux, and Beaumarchais; constant reference, for purposes of comparison, to other comedies, both ancient and modern; lectures and discussions. *Both terms, three hours.*

5. Old French Language and Literature, with special reference to the French element in English; rapid reading of Old French texts; lectures on the history of French sounds and inflections. *Both terms, two hours.*

To be omitted in 1907–1908.

ENGLISH LANGUAGE.

The resources of the Graduate Department of the English Language have been greatly increased by the enlightened generosity of Mr. Eugene M. Armfield, of High Point, N. C., an alumnus of this institution, who has put at the disposal of the Department the annual sum of three hundred dollars for the purchase of books, pamphlets, journals, and other special studies in advanced English.

Candidates for the degree of Doctor of Philosophy who elect advanced work in the English language as their major subject will be expected to take one or more courses in the Germanic languages. All graduate work in the English language presupposes English 6, or its equivalent, and a reading knowledge of German; but, in exceptional cases, English 6 and German 1 may be taken along with the English graduate courses.

Professor SMITH.

7. Advanced studies in (*a*) Old English and (*b*) Middle English. (*a*) Wyatt's or Heyne's *Beowulf*, Thomas Arnold's *Notes on Beowulf*, Förster's *Beowulf-Materialien*, and the discussion of the Beowulf Saga in volume III. of the *Grundriss der Germanischen Philologie* (*b*) Skeat's edition of Chaucer's *Minor Poems* and *Legend of Good Women*, Book IV. in volume II. of Ten Brink's *History of English Literature*, with selected chapters from Lounsbury's *Studies in Chaucer*, and Ten Brink's *Language and Metre of Chaucer*. *Both terms, two hours.* To be ommitted in 1907-1908

12. English Syntax. Problems in advanced grammar will be studied historically. The course will consist chiefly of lectures; Sweet's *Syntax* (volume II. of his *New English Grammar*), Smith's *Studies in English Syntax*, Kellner's *Historical Outlines of English Syntax*,

Einenkel's *Syntax* (in volume I. of the *Grundriss der Germanischen Philologie*), and recent theses on questions of syntax. *Both terms, two hours.*

14. Fifteenth Century English, prose and verse. The lectures will discuss the place of the fifteenth century in literature, the influence of the Scotch dialect, and the changes that English underwent between Chaucer and Spenser; Skeat's *Specimens of English Literature from A. D. 1394 to 1579* (first hundred pages), Mead's *Selections from Sir Thomas Malory's Morte d'Arthur*, Browne's edition of *The Taill of Rauf Coilyear*, Gummere's *Old English Ballads*, and Pollard's *English Miracle Plays*. *Both terms, two hours.*

Among the publications accessible to graduate students of English and German may be mentioned: *Anglia und Beiblatt*, (complete set), *Englische Studien*, (complete set), *Herrig's Archiv*, *Paul und Braune's Beitrxge* (complete set), *Publications of the Modern Language Association of America*, *Modern Language Notes*, *Modern Language Review* (London), *Dialect Notes*, *Publications of the Early English Text Society* (complete set), *Journal of English and Germanic Philology*.

ENGLISH LITERATURE.

Professor HUME.

8. Poetry and Criticism: a study of the art of poetry in general and of the principles of criticism. *Both terms, two hours.*

10. Dramatic Seminary: the language, metrical forms, sources of plot and incident, construction of plays, comparative study of Shakspere and other dramatists. *Both terms, two hours.*

13. The development of Fiction from the Greek romances to Scott; Eighteenth Century Romanticism. *Both terms, two hours.*

PHILOSOPHY.

Professor WILLIAMS.

5. Epistemology: a study of the Critical Philosophy; lectures; theses. First year: Prolegomena and Practical Reason and the works that prepared the way for Kant. Second year: *Kritik der reinen Vernunft*. *Both terms, three hours.*

HISTORY.

Professor BATTLE.

9. Historical Seminary: original research in the history of the United States and of North Carolina during the national and state periods; weekly reports. *Both terms, two hours.*

11. The English Constitution: research in the history of the formation and development of the Constitution of England. *Both terms, two hours.*

13. The American Constitution: research in the history of the formation and development of the Constitution of the United States. *Both terms, two hours.*

14. American Politics: research in the history and development of the political parties in the United States, and their struggles in Congress and before the people. *Both terms, two hours.*

Associate Professor HAMILTON.

10. Civil War and Reconstruction: lectures and research in the history of the Civil War and Reconstruction. *Both terms, two hours.*

ECONOMICS.

Professor RAPER.

3. Economic Institutions and Thought in England and the United States: a general study, largely from the historical point of view, of the economic institutions and systems of economic thought in England and the United States; a special study of socialism. Lectures, readings, and reports. Cheyney's *Industrial and Social History of England*, Brooks's *The Social Unrest*, Spargo's *Socialism*. *Both terms, two hours.*

MATHEMATICS.

Professor CAIN.

4. Calculus; Analytic Mechanics; prerequisite, Mathematics 2. *Both terms, three hours.*

5. Theory of Equations (Burnside and Panton). *Both terms, three hours.* To be omitted in 1907-1908.

6. Differential Equations (Murray). *Both terms, three hours.*

15. Advanced Differential and Integral Calculus (Byerly, Edwards); lectures. *Both terms, two hours.*

Associate Professor HENDERSON.

8. Mechanics of Materials; prerequisite, Mathematics 4. *Both terms three hours.*

10. Stresses in Bridges and Roof Trusses; Graphical Statics; prerequisite, Mathematics 4. *Both terms, three hours.*

Associate Professor STACY.

7. Analytic Mechanics (Bowser). *Both terms, three hours.*

7A. Hydraulics (Merriman). *Both terms, three hours.*

PHYSICS.

Associate Professor LATTA.

6. Thermodynamics. This study is based on Edser's *Heat for Advanced Students*, Ewing's *Steam Engines and other Heat Engines*, and Peabody's *Thermodynamics of the Steam Engine;* prerequisite, Physics 1 and Mathematics 2. *Both terms, three hours.*

7. Alternating Currents and Alternating Current Machinery; testing and study of alternating current machines in the laboratory; lectures and problem work. Text-books: Franklin and Williamson's *Alternating Currents* and Hay's *Alternating Currents*; prerequisite, Physics 1 and 4A. *Both terms, four hours.*

9. Electric Power Transmission. *Spring term, two hours.*

10. Electric Testing: experimental study of electromagnetic machinery and other apparatus; prerequisite, Physics 7. *Both terms, three hours.*

CHEMISTRY.

Professor HERTY.

11. Research in Inorganic and Analytical Chemistry. This course

(with 12 and 13) is intended only for applicants for the degree of Doctor of Philosophy or properly equipped students who desire special training in advanced chemical research. It requires, in addition to the laboratory work, daily conferences with the professor and continual reference to the literature touching the matter under investigation. The work is usually assigned by the professor, but by special permission the student may elect to work upon problems to which he wishes to give particular attention. *Both terms, six hours.*

Associate Professor WHEELER.

12. Research in Organic Chemistry. The statements made in regard to course 11 apply also to this course. *Both terms, six hours.*

Associate Professor MILLS.

13. Research in Physical Chemistry. Acquaintance with the Calculus is required for this course. *Both terms, six hours.*

Professor HERTY.

14. Advanced Inorganic Chemistry. The elements are studied with the idea of showing the fundamental laws of Chemistry and the deepseated relations involved in and leading up to the Periodic System. Attention is also given to those portions of Inorganic Chemistry not usually dwelt upon in the regular courses. The applications of physico-chemical laws and generalizations are emphasized throughout the course. *Both terms, two hours.*

Associate Professor WHEELER.

15. Advanced Organic Chemistry. The most important modern investigations are reviewed and, in addition, special consideration is given to Class Reactions with reference to their application to organic research. *Both terms, two hours.*

The *Journal Club* meets fortnightly. The current journals, American, English, German, and French, purely scientific and technical, are reviewed by the students and instructors. Attendance upon the meetings of the Club is expected of all students taking the above courses.

ZOOLOGY.

Professor WILSON.

2. Comparative Anatomy and Embryology of the Vertebrates; study of

types of fishes, amphibia, reptiles, birds, mammals; development of the characteristic vertebrate organs in the frog and chick; fundamentals of microscopic technique; laboratory work with occasional lectures. *Both terms, three hours.*

3. Comparative Anatomy and Embryology of the Invertebrates; dissection and microscopic study of types of the chief orders, with some consideration of their embryology; laboratory work with occasional lectures. *Both terms, three hours.*.

4. Animal Morphology: advanced zoological work, with detailed study of problems in comparative anatomy or embryology; laboratory work with use of classical text-books and original memoirs; theses. *Both terms, five hours or more.*

BOTANY.

Associate Professor COKER.

2. Special morphology of the mosses, ferns, and higher plants; with particular consideration of homologies; lectures with laboratory and field work. *Both terms, three hours.*

3. Special Morphology of the algae and fungi, with attention to the culture of lower fungi, and the identification of mushrooms; lectures with laboratory and field work. *Both terms, three hours.*

4. Plant Morphology: advanced work in the embryology and anatomy of plants. The student is required to collect and prepare material for the microscopic study of special problems. Theses. *Both terms, five hours or more.*

GEOLOGY.

Professor COBB.

5. Petrography; lectures, laboratory work, and theses. *Both terms, two hours.*

6. Advanced field work and special research in geology or geography; problems assigned individually and work adapted to the professional needs of the student. *Both terms, three hours.*

7. Research course in historical geology. *Both terms, three hours.*

PEDAGOGY.

Professor NOBLE.

5. The study of childhood in transforming modern methods of studying and teaching educational science; readings, discussions, and theses. *Fall term, two hours.*

6. Herbartian Pedagogy. The attempt is made in this course to investigate the Herbartian movement in Germany and in the United States. The works of Rein, Story, Ziller, Lange, and others are studied. Theses. *Spring term, two hours.*

7. American Education: a study of the development of public and private school systems in the United States; research and lectures. *Both terms, two hours.*

STUDENTS.

NAME.	YEAR.	RESIDENCE.
Allen, Risden Tyler,	*First*,	Wadesboro.
B.S., 1906. Geology, Chemistry, Mineralogy. Candidate for S.M.		
Bernard, William Stanly,	*Sixth*,	Chapel Hill.
A.M., 1904 Greek, Latin, English. Candidate for Ph.D.		
Bryan, William Frank,	*First*,	Asheville.
Ph.B., 1900. German, English. Candidate for A.M.		
Carmichael, William Donald, Jr.,	*Third*,	Durham.
Ph.B., 1907.		
Connor, Robert Diggs Wimberly,	*Fourth*,	Wilmington.
Ph B., 1899. History, Latin, English. Candidate for A.M.		
Drane, Frank Parker,	*First*,	Edenton.
Ph.B., 1906. Chemistry, Drawing. Mathematics. Candidate for S.M.		
Hickerson, Thomas Felix,	*Second*,	Ronda.
Ph.B., 1904. Mathematics, Drawing, Economics. Candidate for A.M.		
Johnston, George Anderson,	*Second*,	Chapel Hill.
B.S., 1904. Chemistry. Candidate for A.M.		
Jordan, Strowd,	*First*,	Durham.
A.B., 1904. Chemistry, English. Candidate for S.M.		
McKie, George McFarland,	*Sixth*,	Chapel Hill.
Graduate Emerson School of Oratory. English, French, German. Candidate for A.M.		
McLean, Frank,	*Second*,	Maxton.
A.B., 1905. English, German, Philosophy. Candidate for A.M.		
Morrow, Rufus Clegg,	*Second*,	Oaks.
A.B., 1905. Mathematics, German, English. Candidate for A.M.		
Pogue, Joseph Ezekiel, Jr.,	*First*,	Raleigh.
A.B., 1906. Chemistry, Geology, Drawing. Candidate for S.M.		
Randolph, Edgar Eugene,	*Third*,	Charlotte.
A.M., 1906. English, German, Geology. Candidate for Ph.D.		
Rankin, Frank Bisaner,	*First*,	Mount Holly.
A.B., 1901. Philosophy, English, Public Speaking.		
Rankin, Willie Calvin,	*Second*,	Whitsett,
A.B., 1904.		
Roberts, John Wesley,	*Second*,	Hertford.
Ph.B., 1901. History, English. Pedagogy. Candidate for A.M.		

Smallwood, Robert Fleet, *First*, New Bern.
B.S., Davidson College, 1906. Drawing, Mathematics, German.

Stacy, Marvin Hendrix, *Third*, Morven.
A.M., 1904. Mathematics.

Swift, Wiley Hampton, *First*, Greensboro.
Ph.B., 1901. Pedagogy, History, Philosophy. Candidate for A.M.

Underhill, Wingate, *Third*, Kinston.
A B., 1897. Latin, History, English. Candidate for A M.

Walker, Nathan Wilson, *Second*, Chapel Hill.
A.B., 1903. English, History.

Washburn, Benjamin Earl, *First*, Rutherfordton.
A.B., 1906. English, Pedagogy. Candidate for A.M.

Whitaker, Bessie Lewis, *First*, Chapel Hill.
A.B., Stetson University. History, English. Candidate for A.M.

Wilson, John Kenyon, *First*, Elizabeth City.
A.B., 1905. History, English, Philosophy. Candidate for A.M.